How to Install MIPSpro 7.4 Compilers as a Module in IRIX 6.5.X

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Symptom(s):

How to Install MIPSpro 7.4 Compilers as a Module in IRIX 6.5.X
How to install modules Compilers 7.4
Install MIPSpro Compilers 7.4 on modules
7.4 modules Compiler Install

Fact(s):

IRIX 6.5.X
MIPSpro Compiler 7.4
MIPSpro Fortran 77 Compiler 7.4
MIPSpro Fortran 90 Compiler 7.4
MIPSpro C Compiler 7.4
MIPSpro C Compiler 7.4

SGI Solution:

To install MIPSPro Compilers V7.4 on IRIX 6.5.x systems as a modules compiler, the following CDROM distributions are required:

```
        IRIX Development Foundation 1.3                         (812-0757-004)
        Compiler Execution Environment 7.4 CD                   (812-0924-002)
            IRIX 6.5 Development Libraries CD                           (812-0766-002/3)
            IRIX 6.5 Foundation 1 CD                            (812-0759-002)
        The desired languages:
        MIPSpro C Compiler 7.4                          (812-0707-004)
        MIPSpro C++ Compiler 7.4                                (812-0400-010)
        MIPSpro Fortran 77 Compiler 7.4                         (812-0403-010)
        MIPSpro Fortran 90 Compiler 7.4                         (812-0402-010)

Note - # means the command is done as root, % means command is done as a user.
        % su root
        # inst -r /opt/MIPSpro/74

        {Insert the compiler-execution-environment-7.4 CD in /CDROM}
        inst> open
        inst> sh eject

        {insert irix-6.5-foundation-1 CD}
        inst> open
        inst> sh eject

        {insert irix-development-foundation-1.3-for-irix-6.5.x}
        inst> open
        inst> sh eject

        {insert irix-6.5-development-libraries CD}
        inst> open
        inst> sh eject

        {insert mipspro compiler-7.4 CD}
        inst> open
        inst> sh eject

        {insert any other compiler CDs as required e.g. :

        MIPSpro C++ Compiler 7.3 812-0400-009
        MIPSpro Fortran 77 Compiler 7.3 812-0403-009
        MIPSpro Fortran 90 Compiler 7.3 812-0402-009}

        inst> keep all
        inst> install dev ftn_dev ftn90_dev ftn77_dev c++_dev c_dev irix_dev compiler_dev
            inst> install ftn90_fe ftn77_fe c_fe c++_fe modules

                {The dev components and front ends must be installed; these are the distinguishing components between compiler versions.
The execution
                environments are fully compatible forwards and backwards on IRIX 6.5.x for the 7.2.1. and 7.3 compiler families. The 7.4
execution
        environment will run 7.2.1.x and 7.3.x binaries, but we do not guarantee that all 7.4 binaries will run on 7.3.x and 7.2.1.x
execution environments.            At this point, you can also decide whether you want to install Motif or X development/execution
subsystems or any other development packages.   These next two steps are personal preference and ensure the requisite distributions are
open to do so.}

        inst> install ftn_eoe c++_eoe compiler_eoe
        inst> install motif_dev motif_eoe x_eoe x_dev

                inst> set rulesoverride on
        inst> go
        inst> quit


To configure:

1) Create the modulefile for the version installed:

        % su root
        # cp /opt/modulefiles/MIPSpro /opt/modulefiles/74

2) Edit /opt/modulefiles/74 to reflect the target module compiler version installed.  Change the line beginning as :

                                set MIPSPRO_LEVEL       MIPSpro
to:
                                set MIPSPRO_LEVEL       74

3)  This next step is one of system administration preference.  The idea is to prevent those users that have the capacity to recompile
the kernel from inadvertently doing so with a compiler installed in modules rather than the built-in compiler with the operating system.
Ensure either that the TOOLROOT environment variable is disabled or that modules is unloaded prior to recompiling the kernel.  For the
user in question, either ensure:

        % unsetenv TOOLROOT
or
        % module unload 74
        {and any other modules compiler loaded; MPT and SCSL modules can remain loaded}

To access the MIPSpro compiler using modules:

        % source /opt/modules/modules/init/csh   (should be added to .cshrc)
```

```
        % module load modules                    (should be added to .cshrc)
        % module load 74                  (can be added to .cshrc)
        % module unload               (can be added to .cshrc)  - to switch back
```

Some notes: this doesn't install eoe.sw.base, so the traditional /etc/compiler.defaults file will be missing. This file can be copied over to the modules mount point and configured:

```
    # mkdir /opt/MIPSpro/74/etc
    # cp /etc/compiler.defaults /opt/MIPSpro/74/etc/compiler.defaults
```

Additional Details

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